

Student Teachers' Evolving Conceptions of Self, Learning and Teaching: A Longitudinal Study

Introduction

Access to elementary school teaching in Ireland is provided through concurrent and consecutive programmes of teacher education which are accredited by the professional standards body for the teaching profession, The Teaching Council, established in 2006. As a member state, Ireland is influenced also by the European Commission's work on teacher education, which prioritises the improvement of teacher quality and teacher education. Following an International Review Panel Report (2012) on behalf of the Department of Education and Skills on Initial Teacher Education provision, specific recommendations were made in terms of enhancing teacher education programmes in Ireland. Part of this reconceptualisation included increased duration of the B.Ed. Degree from a three- to a four-year programme; the inclusion of undergraduate research-informed teaching; reflective portfolios; guided reflection; examination of the transition from teacher education to school; mentoring; induction and school leadership. The first students were enrolled on this reconceptualised programme in September 2012 and completed their studies in 2016. Following a similar review, the three-semester Graduate Diploma in Primary Teaching was reconceptualised and extended to a two-year programme leading to the award of a Professional Master of Education (Primary Teaching) degree. The first cohort of students commenced this programme in Autumn 2014 and graduated in 2016. This longitudinal study involved students who participated in the B.Ed programme prior to its reconceptualisation.

Theoretical Perspective

Since Lortie (1975) pointed to the need to explore the role of prior experiences in the process of teacher learning, a significant body of research has explored the impact of belief systems and personal epistemologies on preservice teachers' learning strategies and learning outcomes (Brownlee, 2011; Fives and Buehl, 2010, 2012; Uibu et al. 2017; Walker et al. 2012). It is widely accepted that formal teacher education has an important, yet secondary impact on teachers' thinking, the primary influences being life, school and career experiences prior to entering formal programmes of teacher education (Olsen, 2008; Ronfeldt and Grossman, 2008; Walkington, 2010; Walker et al. 2012).

Experiences of school and family leave many prospective teachers with memories and beliefs about learning and teaching (Feiman-Nemser, 2001; Sugrue, 2004). These beliefs interact with the content and pedagogy of teacher education programmes and influence what and how preservice teachers learn (Kagan, 1992; Calderhead 1996; Pajares, 2000; Tang et al. 2014). In an attempt to document, understand and influence this phenomenon, researchers have raised questions about the nature of the beliefs that pre-service teachers hold (Feiman-Nemser, 2001; Munby, Russell, and Martin, 2001; Clandinin et al. 2006; Zeichner and Liston, 2014), how they came to hold these beliefs (Lortie, 1975; Borg, 2015) and how these beliefs might be modified to enable their professional development as teachers (Yadav and Koehler, 2007; Kang, 2008).

As beliefs or personal theories of teaching are constructed by individuals learning within their socio-cultural contexts, they begin to form at a very early age. The earlier a belief is incorporated into the belief system the more likely it is that it will persevere (Pajares, 1992). Beliefs serve as filters which screen new information,

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3 ultimately determining which elements are accepted and integrated into the
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5 professional's knowledge base (Peng and Fitzgerald, 2006; Yadav and Koehler, 2007).
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7 Typically, new knowledge will be accepted in as far as it conforms with the preservice
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9 teacher's pre-existing conceptions about teaching. A direct consequence of this position
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11 is that only congruent information will be integrated into the knowledge structure
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13 (Sutherland, Howard and Markauskaite, 2010; Fives and Buehl, 2012).
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17 Teachers' beliefs influence their instructional practices (e.g. teacher-directed
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19 versus student-directed), their perception of content knowledge (e.g. knowledge as
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21 absolute versus knowledge as contested), and their perceptions of students as learners
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23 (e.g. learners without power versus learners with agency) (Howard et al. 2000; Johnston
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25 et al. 2001; Schraw and Olafson, 2002; Tsai, 2002; White, 2000; Yadav and Koehler,
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27 2007) and their perceptions of self-as-teacher (Tang et al. 2014). Following a review of
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29 the literature on teachers' personal epistemology, Feucht (2010) concluded that
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31 teachers' beliefs span a developmental continuum embracing 'absolutist, multiplisit, and
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33 evaluativist' beliefs (Kuhn et al. 2000 cited in Feucht 2010, 66). *Absolutist teachers*
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35 embrace a behaviourist epistemology and believe that teaching involves the transfer of
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37 knowledge from the teacher as expert to the student as naïve, passive learner (Olafson
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39 and Schraw, 2006). As such, absolutist teachers adopt the 'conduit metaphor' of
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41 teaching (Mascolo, 2009). In contrast, *multiplist teachers* embrace a constructivist
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43 epistemology (Vygotsky, 1978; Howard et al. 2000) and create learning environments
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45 in which students actively construct their own personal understanding of content
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47 knowledge. Finally, *evaluativist teachers* embrace contextualist worldviews (Schraw
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49 and Olafson, 2002). They perceive knowledge as tentative and contextual and promote
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51 learning activities in which students collaboratively construct knowledge on the basis of
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53 a shared understanding. Similarly, Tsai (2002) categorised the beliefs of 37 Taiwanese
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3 science teachers as either ‘traditional’, ‘process’, or ‘constructivist’. The ‘traditional’
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5 category embraced empiricism and logical positivism; the ‘process’ category embraced
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7 naive realism, while the ‘constructivism’ category embraced a broadly constructivist
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9 philosophy.
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12 If preservice teachers’ beliefs are as influential on classroom practice and as
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14 resistant to change as research suggests (e.g. Fives and Gilles, 2014; Borg, 2015) and if
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16 beliefs are often limiting or inappropriate in the classroom context, it is imperative that
17
18 teacher educators investigate the beliefs that preservice teachers espouse as they embark
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20 on their teacher education programmes and if, and how, these beliefs are changed as a
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22 consequence (Korthagen, 2004). Furthermore, since belief systems influence classroom
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24 teaching, it is also important that preservice teachers be made aware of this relationship
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26 and be provided with opportunities to identify and explore their beliefs through critical
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28 reflection. Research suggests that without opportunities for guided reflection in teacher
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30 education programmes (Kagan, 1992; Korthagen, 2004; Fives and Gilles, 2014),
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32 preservice teachers are likely to revert to practices they recall from their own
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34 schooldays and merely reinforce established patterns of behaviour. Intervention studies
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36 show that preservice and in-service teachers’ beliefs can change as a result of different
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38 instructional approaches (Gill et al. 2004; Howard et al. 2000; Brownlee et al. 2001) and
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40 when there is an explicit focus on reflective practice (Valanides and Angeli, 2005).
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42 These research studies underscore the need to establish challenging teacher education
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44 programmes that impact preservice teachers’ emotions and cognitions and integrate their
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46 personal experiences prior to and during their pre-service education (Timoštsuk and
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48 Ugaste, 2012; Von Wright, 1997).
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56 Research into teacher thinking has raised important issues about how teachers
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58 learn to teach and how they can be assisted in replacing simplistic notions about
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3 teaching with more informed understandings of how pupils learn (Putnam and Borko,
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5 2000; Borg, 2003). However few studies have examined longitudinally how preservice
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7 teachers' personal epistemologies evolve and change as they progress through their
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9 teacher education programmes (Britzman, 1986; Brownlee, 2003; Korthagen, 2004;
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11 Walker et al. 2012). This dearth of longitudinal research was highlighted by Cochran-
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13 Smith et al. (2008, 828):

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There is considerable agreement that the field of teacher education in general and the study of teacher learning in particular would benefit greatly from more longitudinal studies of teacher learning over time and how that learning plays out in practice.

A focus of this paper, therefore, is on extending our understanding of the deliberate role of guided reflection in teacher education programmes through reshaping preservice teachers' beliefs about teaching and learning. It expands the 'reflective teaching' concept (Calderhead, 1989) and demonstrates the need for preservice teacher education programmes to close the gap in preservice teachers' capacity for reflective practice. Drawing on previous research by Luft and Roehrig (2007), the current study shows that pre-service teachers have a capacity to modify their beliefs and personal theories about self, learning and teaching, if explored and reflected upon systematically within a teacher education programme.

The next section provides an overview of the present study which investigated the evolving personal epistemology and beliefs of a group of preservice teachers, as they progressed through a three-year Bachelor of Education degree programme in Ireland.

Research Methods and Methodology

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3 This longitudinal qualitative study (Epstein, 2002) examined if and how preservice
4 teachers' beliefs changed as they engaged with the coursework and school placement
5 requirements of a three-year Bachelor of Education degree programme. The literature
6 review informed the research design which sought to investigate participants' beliefs at
7 the outset, middle and conclusion of the teacher preparation programme in order to
8 evaluate the nature and degree of belief change. The research design provided a way
9 for preservice teachers to be made aware of the relationship between their belief
10 systems and classroom teaching and provided opportunities for them to identify and
11 explore these beliefs through focussed reflection. Grounded theory (Glaser and
12 Strauss, 1967) was chosen as the research method as it is a systematic method of
13 qualitative data analysis leading to the discovery of theory from data (Charmaz, 1990,
14 2004, 2006, 2014, 2017; Clarke, 2005; Creswell, 2002, 2005, 2013; Strauss and Corbin,
15 1990, 1994, 1998). In this method, data collection, analysis and eventual theory stand
16 in close relationship with one another.
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38 A key characteristic of grounded theory is the use of an emergent design
39 (Creswell, 2005) whereby 'the researcher collects data, analyzes it immediately rather
40 than waiting until all data are collected, and then bases the decision about what data to
41 collect next on this analysis' (405). Therefore, the researcher does not begin with pre-
42 conceived notions but lets the theory emerge as the study progresses and the data are
43 analysed. According to Charmaz (2004), grounded theory methods involve systematic
44 inductive guidelines for collecting and analysing data to build tentative theoretical
45 frameworks that explain the collected data. Hence the research process is iterative,
46 reflexive and recursive. The duration of the study and structure of the bachelor of
47 education program, which involved alternate periods of university-based and school-
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3 based work, provided optimal conditions and enabled successive periods of data
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5 collection and analysis which informed each subsequent round of data collection.
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7 Validity was ensured through triangulation of data from multiple sources and by
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9 member checking (Creswell, 2005) which was achieved in this study through the
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11 iterative interview process.
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15 The study set out to explore the following questions:

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18 (1) What are the initial personal theories of learning and teaching of pre-service
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20 teachers?
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22 (2) Do preservice teachers' personal theories of learning and teaching change during
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24 their pre-service programme? If so, how?
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28 In seeking to address these questions the study examined the initial personal
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30 theories of teaching and pupil learning of 27 undergraduate preservice teachers who
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32 self-selected to participate in the study and were drawn from a year-group cohort of 352
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34 preservice teachers. Using a grounded theory approach, the initial, entering theories of
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36 teaching of these preservice teachers were interrogated in the first semester and seven
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38 participants were tracked over their entire teacher education programme.
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42 The study comprised two phases. The first phase involved 27 B.Ed. students (6
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44 male and 21 female, aged 18-19 years) who articulated their initial beliefs about
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46 learning and teaching during the first week of their programme. Students were asked to
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48 write freely in response to the following prompts:
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52 *Pupils learn best when ...*

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55 *I want my teaching to be...*
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3 Personal metaphors of teaching were written in response to the prompt:
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6 *Good teaching is*
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9 The second phase of the research involved 7 participants (3 male and 4 female)
10 whose personal theories reflected the dominant themes which emerged from an analysis
11 of the data from Phase 1. These participants were each interviewed by the researchers
12 on three occasions, at the end of their first, second and final years on the programme.
13 During each hour-long interview, participants were presented with typed transcripts of
14 their previous iterations of their personal theories of learning and teaching and asked to
15 consider if, how and why their prior beliefs might have changed. In other words,
16 revisiting their earlier expression(s) of their beliefs about learning and teaching,
17 participants were invited to consider the following:
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30 *Which aspects remain the same?*
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32 *Which aspects have changed?*
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34 *What factors have influenced these changes (e.g. experience of teaching, lecture*
35 *content and ideas, conversations with others, personal reading ...)?*
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39 As part of their Microteaching module in Year 1, preservice teachers were
40 requested to reflect on one formative learning experience from each Microteaching
41 session and to discuss this experience in terms of their evolving understandings of
42 learning and teaching. These formative learning experiences formed part of the data for
43 the study. In addition, participants' written reflections on their five school placement
44 experiences were analysed as part of the data for the study. Analysis began with the
45 researchers holding 'conversations' with the data and thinking about any regularities or
46 patterns in the database that related to the research questions. Moving toward theory
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3 involved coding, memoing and diagramming procedures involving the constant
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5 comparison method. Many questions were raised as we engaged with and analysed the
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7 data which arose from each iteration of preservice teachers' personal theories of
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9 learning and teaching. For example, the following observations and questions, which
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11 were recorded in our research journal, arose from our interrogation the data from the
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13 first and second iterations of the preservice teachers' personal theories which were
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15 gathered at the beginning and end of Year 1 of the programme.
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20 The trends observed in the data from Personal Theory of Teaching Iteration 1
21 (PTT1) and Personal Theory of Teaching Iteration 2 (PTT2) include:
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24 • an initial idealistic optimism being tempered by a realization that the role of the
25
26 teacher is challenging and complex
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29 • a reduction in their desire to be liked and remembered and an emerging
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31 recognition that there is a conflict between the roles of teacher and friend
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34 • a decreasing concern for the welfare of the pupils and an increasing concern for
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36 their own welfare as teacher
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39 • a growing recognition of the heterogeneity of pupils and the complexity of
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41 addressing their individual needs
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44 • a shift from a conception of teacher as Oracle to teacher as facilitator of learning
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47 • a shift from concerns about teaching the lesson to concerns about teaching the
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49 learners
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52 • preservice teachers' understanding of the impact/purpose/outcomes of teaching
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54 does not appear to have developed to any significant extent. References to the
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56 purpose of teaching are generally vague and lacking in specificity.
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58 At each stage of data analysis, the database was re-visited to identify confirming and
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3 discrepant evidence of our emerging observations. Other sources of data were
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5 consulted at each stage for the purpose of triangulation, including the informants'
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7 Microteaching and school placement journals and portfolios. Our observations
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9 underwent ongoing modification and refinement in the light of this recursive and
10
11 reflective process.
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15 The NVivo qualitative software package was used to assist in exploring and
16
17 interpreting the data. As the coding and reviewing of the data progressed, we observed
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19 that each iteration of the participants' personal theories contained references to the
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21 following broad themes:
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- 25 • Conceptions of self-as-teacher
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- 27 • Conditions which favour pupil learning
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- 29 • Perceptions of effective teaching.
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33 Nodes were coded for each articulation of the participants' personal theories of
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35 teaching under tree nodes which were summarised to 'self-as-teacher', 'learning' and
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37 'teaching'. Full transcripts of the data coded at each node were printed and interrogated
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39 further by the researchers. Axial coding was employed to establish the sub-categories
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41 which existed within and between the three main themes. For each of these overarching
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43 themes, a grid was devised containing the spread of nodes pertaining to this theme.
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45 Cognate nodes, or pieces of the puzzle, were rearranged to form a number of sub-
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47 themes within each of the four broad themes. The database was re-visited to identify
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49 confirming and discrepant evidence of these observations. Initial observations were
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51 modified and refined in the light of this process. Hence, the theory which is presented
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53 in the following paragraphs emerged from the data and is grounded in the data.
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Fig 1: Themes with sub-themes listed in descending order of priority

Presentation and Discussion of Data

Incipient Personal Theories of Learning and Teaching

An analysis of data from this study revealed that preservice teachers, at the point of entry to their teacher education programme, demonstrated relatively unsophisticated and undeveloped personal theories of learning and teaching which were in large part distilled from their personal experiences as learners and observers of teachers. The influence of their prior personal experiences of schooling on their incipient beliefs about learning and teaching are reflective of Buehl and Fives' (2009) finding that personal experiences of schooling and instruction are foundational to preservice teachers' knowledge and beliefs. Preservice teachers at this beginning stage lacked perceptive insights into the complexities of teaching and learning and proposed simplistic approaches and solutions to the challenges faced by teachers and learners (Bird, et al. 1993; Feiman-Nemser, et al. 1989; Pajares, 1992; Sugrue, 1997). Their strong identification with their prospective pupils was manifest in beliefs that teaching should be positive and enjoyable and that pupils should feel safe in the classroom and receive praise from the teacher in a fair, supportive and participative environment. In addition, they expressed a desire to be popular among their prospective pupils and flexible in their approach to teaching.

Above all I would like to be a teacher that was well liked and respected by the pupils. The kind of teaching I would like to engage in is the kind that would get

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3 the children involved in the lessons. I would engage in an open system where I
4 would ask questions and also the children could ask me questions without feeling
5 intimidated or feared by me. I would try to make the children feel as comfortable
6 as possible in the classroom surroundings.
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9 (Kate, PPT 1)
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11 Their incipient beliefs about teaching were absolutist (Feucht, 2010) and
12 reflected a behaviourist epistemology involving the transfer of knowledge from expert
13 teacher to passive learner (Olafson and Schraw, 2006). The conduit metaphor of
14 teaching (Mascolo, 2009) was prevalent with many references to teachers imparting and
15 pupils receiving information:
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22 My metaphor is that teaching is a handshake....The teacher offers the hand of
23 knowledge, the pupil takes this offered hand and they are joined in the education
24 process.
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27 (Brian, PTT 1)
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31 With regard to learning, preservice teachers believed that pupils learn best when
32 they enjoy their lessons, feel safe and are praised by the teacher. They felt that learning
33 is enhanced when teachers are fair and supportive and when pupils trust and do not fear
34 their teacher. Motivation was highlighted as a key feature of pupil learning and they
35 believed that, it is the teacher's role to 'tap into' existing interests of the pupils.
36 Preservice teachers at this early stage conceived of learning as being future-orientated,
37 'preparing pupils for life after school' (Cara, PTT 1), helping them to 'reach their full
38 potential as individuals' (Amelia, PTT 1) and developing their confidence.
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51 At this point, there were few references to the role of planning and preparation
52 in teaching and students did not refer to the differential learning needs or abilities of
53 pupils. Interestingly, there were no references to professional fulfilment or the need for
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3 professional development within teaching; neither did they express a concern for the
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5 inner life or emotional wellbeing of the teacher.
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8 9 *Personal Theories at End of Year 1*

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11 The second iteration of their personal theory of teaching and learning revealed that
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13 substantial evolution in the beliefs of preservice teachers had occurred after the first
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15 year of their teacher education programme. Having stepped into the role of teacher, for
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17 periods during Microteaching and School Placement, preservice teachers' perspectives
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19 expanded to embrace considerations beyond their subjective desires to be popular and to
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21 occupy that place in the lives of their pupils that their favourite teacher occupied in
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23 theirs (Ross, 1989). Analogous to Walker et al. (2012) who found that over the course
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25 of their degree preservice teachers were more likely to believe that 'learning might
26
27 take time' (32), by the end of Year 1, participants in this study displayed an emerging
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29 recognition that teaching is a complex activity and that professional learning takes time.
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36 I still want my teaching to be challenging, interesting and enjoyable. I do realise now
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38 though, that to achieve this will require years of practice and hard work!

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40 (Olanda, PTT 2).
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42 Preservice teachers felt conflicted in the tension between their subjective desires
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44 and the objective responsibilities that they associated with the role of teacher – between
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46 the desire to be a friend and the need to be a figure of authority. Consistent with other
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48 research (Fuller and Bown, 1975; Kagan, 1992), there was evidence that the students
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50 had progressed from their initial identification with the pupils to an emerging
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52 identification with themselves-as-teachers. 'If the children feel able to confide
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54 everything in me the line between teacher and friend may be more difficult to maintain
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56 and therefore discipline may be difficult to maintain in the classroom' (Juliet PTT 2).
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5 Relating back to findings by Luft and Roehrig (2007) where pre-service teachers
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7 tended to be more open to change than their experienced counterparts, preservice
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9 teachers at this point in the study no longer prioritised pupil enjoyment of lessons
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11 beyond other considerations and they acknowledged that effective teaching may not
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13 always be enjoyable. Their understanding of flexibility had also expanded to embrace
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15 the need to respond to the interests and needs of the pupils through what Schön (1987)
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17 termed “reflection-in-action” and through the prospective and retrospective dimensions
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19 of planning, preparation and reflection. They now believed that teaching is not easy but
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21 that familiarity with essential teaching skills enhances teacher confidence and that
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23 planning and preparation are pre-requisites of good teaching.
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30 While still believing that pupil learning is enhanced when pupils feel safe, find
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32 lessons enjoyable and receive praise from the teacher, they believed at this stage that
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34 pupils feel more contented when there is discipline and mutual respect and when the
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36 teacher is self-confident in her/his teaching. They now believed that effective discipline
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38 and class management are essential dimensions of teaching: “Pupils learn best when
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40 ...there is control and order and they know exactly what they have to do” (Frank PTT
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47 While there was still a prevalence of conduit metaphors of teaching (Mascolo,
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49 2009) which indicated a behaviourist epistemology, there was evidence at this stage of
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51 an emerging awareness of the nature of pupil learning and the value of collaborative and
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53 constructivist approaches to teaching. They now espoused a belief that effective
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55 teaching is child-centred where the teacher facilitates learning and pupils have
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3 opportunities to learn from each other. However, preservice teachers continued to hold
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5 a limited perception of the complexities of teaching and the diverse learning needs
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7 within the classroom.
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10 11 *Personal Theories at End of Year 2*

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13 The third iteration of preservice teachers' personal theories of learning and teaching
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15 took place at the end of their second year on the course when the preservice teachers
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17 had completed teaching practices in middle (7-9 year olds) and infant classes (4-6 year
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19 olds) and had pursued modular courses in the foundations and pedagogy of education.
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21 There was evidence at this stage of a significant shift in preservice teachers'
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23 conceptions of 'self-as-teacher' (Tang et. al, 2014). Preservice teachers now no longer
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25 prioritised being liked by the pupils but felt that having their respect was more
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27 important. Furthermore, their prior belief that teachers who exhibit warm, caring
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29 characteristics are automatically liked and respected was found to be inadequate.
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36 I said [in my personal theory of teaching] in First year that I wanted to be
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38 'approachable'. Well I still want to be approachable but I think I had a more
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40 aspirational view of it then because I wanted to be really, really caring and really, really
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42 approachable. You know, I don't want a threatening environment in the classroom at
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44 all but I know it is so hard to keep discipline in the classroom and it's very hard to come
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46 across as completely on their level because once they see you like that, it is hard to get a
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48 grip on them when you have to.
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50 (Gráinne, PTT 3)

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52 Their beliefs about pupil enjoyment of lessons had also evolved to de-emphasise
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54 the importance of the teacher's personality and to emphasise the importance of pupil
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56 involvement and activity in their enjoyment of lessons. They still retained the belief
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3 that effective teachers are flexible and reflective, modifying their teaching in response
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5 to pupil need and interest. With regard to teaching content, there was less evidence at
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7 this point of a belief in conduit metaphors of teaching. Preservice teachers had become
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9 more concerned than before about their methods of content delivery and the scaffolding
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11 of pupils' understandings. For the first time in the data, there was evidence of a belief
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13 that effective teachers respond to the individual needs and abilities of the pupils.
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15 Hence, the lens of their awareness had now expanded to embrace considerations of self,
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17 pupils and task.
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21 I had to learn that just seeing a child that didn't speak to you didn't mean that she
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23 wasn't taking anything in, she was taking everything in and that taught me a lot about
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25 not judging a child with a disability. As a teacher I have to find out what works for
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27 each and every child, and make sure that they are getting what they need to progress.

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29 (Dara, PTT 3)
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32 However, preservice teachers were still struggling with the management of their
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34 "emotional relationships" with the pupils (Timoštšuk and Ugaste, 2012) and were still
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36 concerned about "personal survival" in the classroom (Maynard, 2001). Those who
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38 experienced classroom management challenges concluded that certain active
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40 methodologies recommended by faculty were "too idealistic". Consistent with other
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42 studies, it was the issue of classroom management which elicited the greatest levels of
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44 anxiety amongst participants at this stage in their development (Kagan, 1992; Hoover,
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46 1994; Guillaume and Rudney, 1993; Kyriacou and Stephens, 1999; and Maynard, 2001).
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50 51 *Personal Theories at End of Year 3* 52

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54 The fourth iteration of preservice teachers' personal theories of learning and teaching
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56 took place at the end of their final year on the course during which they had undertaken
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58 a five-week school placement where they took full responsibility for teaching a class of
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3 their choice. They had also completed a two-week Alternative Educational Placement
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5 in a non-mainstream educational setting. The fourth iteration of undergraduate
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7 preservice teachers' personal theories of teaching indicated substantial change.
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9 However, as Guillame and Rudney (1993) stated, preservice teachers "did not so much
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11 think about different things as they grew, they thought about things differently" (79).
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13 Preservice teachers, at this stage, displayed a greater awareness of the quality of
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15 relationships that exist within the class and viewed relationship as the bedrock of
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17 effective teaching. They had modified their beliefs about praise to emphasise the
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19 importance of giving judicious rather than indiscriminate praise. They also believed
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21 that lesson content should be relevant to the lives of the pupils. There was a much
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23 greater consciousness amongst the participants at this stage of the importance of
24
25 addressing the specific learning needs of individual pupils. They attributed this change,
26
27 in particular, to their Alternative Educational Experience placements where many had
28
29 opportunities to work closely with children with special educational needs.
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36 I spent my AEE placement as a Resource Teacher in a Boys school. I worked with a
37
38 child who had Dyslexia. While working with him in the mainstream class I found him
39
40 to be disruptive and loud wanting to be heard above the others. When he worked with
41
42 the resource teacher he was like a different child, he blossomed My perception of
43
44 the child changed totally when working with him in the resource class, I got to know his
45
46 personality where as in the general class I was more aware of him as a child that caused
47
48 disruption.
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50 (Juliet, PTT 4)

51
52 Their beliefs regarding the importance of reflection had expanded and at this
53
54 stage they believed that reflection is central to personal and professional growth and
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56 provides insight into planning, structure, method and relationships.
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5 I think it [reflection] is very important, if you don't reflect you will never change the
6 way you do something. You are not going to adapt when you are older. If you don't
7 reflect you are going to teach the same way in September as in 10 years from now....
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11 (Martin, PTT 4)
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13 However, there was little evidence of a critically reflective stance (Bonfield and
14 Horgan, 2016) and their reflections on practice rarely explored equity or justice issues,
15 interrogated their own assumptions, or displayed “an awareness that actions and events
16 can be understood from a range of different perspectives and are influenced by social,
17 cultural, historical or political contexts” (49). They still conceptualised the outcome of
18 teaching broadly as developing the “whole child”. While there was evidence that the
19 preservice teachers believed in the value of constructivist, child-centred pedagogies
20 ((Vygotsky, 1978; Howard et al. 2000; Tsai (2002), they still displayed a certain caution
21 about implementing some of the methodologies recommended by their college lecturers,
22 believing instead that “trial and error” was necessary to determine the approaches most
23 suitable to pupil interest and class management. Preservice teachers were still
24 conscious of navigating a path between the seemingly conflicting desires to be liked and
25 to be respected as authority figures.
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44 I like children and this was part of my reason for wanting to be a teacher. My first year
45 T.P. was not very stressful but it was hard to get used to dealing with children in the
46 capacity of being a teacher rather than as a friend or a babysitter. It is a very different
47 role being responsible for imparting knowledge to children....My home T.P. was a
48 challenge because of my involvement with the children as a sports coach. It was a
49 different role to relate to them as a teacher and to maintain the distance that this
50 required.
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(Dara, PTT 4)

With regard to the content of teaching, there was still some evidence at this point of a belief in the conduit metaphor of teaching (as is evidenced by the above quotation) however preservice teachers believed that content knowledge needs to be mediated via participative, constructivist methodologies.

Certain beliefs, however, had not changed since the previous iteration. With regard to class management and discipline, preservice teachers still believed that effective discipline and class management are essential dimensions of teaching. While they still desired to be liked and fondly remembered, they were still grappling with the seemingly conflicting desire to assert their authority. At the point of exit from the programme, preservice teachers were still outward focussed in their conceptions of teaching and made few references to the importance of personal or professional development in their ongoing learning.

Table 1: Evolving Personal Theories of Learning, Teaching and Self-as-Teacher

Findings

This longitudinal study of preservice teachers' beliefs found, similar to Walker et al (2012) and Brownlee et al (2011) that during their undergraduate programme preservice teachers' beliefs evolved and became more nuanced and sophisticated. The results of this study demonstrated that over the course of their degree, substantial change occurred in their conceptions of self-as-teacher, their beliefs about learning and

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2
3 teaching, and the value of reflective practice in their ongoing professional development.
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6 With regard to their personal and professional identity, this research has
7
8 demonstrated that preservice teachers' conceptions of self-as-teacher (Tang et al. 2014)
9
10 expanded in focus and complexity during the course of their teacher education
11
12 programme. There was evidence of an outward trajectory which progressed from a
13
14 strong identification with the pupils, to enthusiasm about teaching methods, to self-
15
16 survival concerns, to a focus on the learning needs of individual pupils. However,
17
18 unlike other researchers who postulated that preservice teachers' trajectories of
19
20 professional development were outward and linear (Fuller and Bown, 1975; Kagan,
21
22 1992), this research found evidence of a recursive trajectory where preservice teachers
23
24 returned repeatedly to a reconsideration of earlier concerns as they expanded their
25
26 cognitions and further developed their teaching identities. Throughout their programme
27
28 preservice teachers grappled with trying to find an appropriate balance between their
29
30 conflicting emotional impulses while trying to manage the relationship dimensions of
31
32 teaching (Timoštšuk and Ugaste, 2012).
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38 With regard to changes in conceptions of learning, preservice teachers
39
40 increasingly balanced their desire for pupil enjoyment of teaching with other competing
41
42 considerations leading to the belief that pupil contentment is a concomitant of
43
44 discipline, mutual respect, positive pupil-teacher and pupil-pupil relationships and
45
46 teacher self-confidence. While initially embracing "absolutist beliefs" (Feucht 2010,
47
48 66) and believing that learning involves the transfer of knowledge from teacher to
49
50 learner, over time, they modified this "conduit metaphor" (Mascolo, 2009) to
51
52 accommodate incremental insights into the nature of pupil learning and began to
53
54 conceive of learning as more individualistic, active and integrative. They identified the
55
56 need for teacher responsiveness to pupil interests and the need to provide appropriate
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3 challenge for pupils. However, while their beliefs expanded to espouse participative,
4
5 constructivist pedagogies where pupils actively build their personal understanding of
6
7 subject content (Vygotsky, 1978; Howard et al. 2000), their implied references to
8
9 content knowledge being fixed and uncontestable (Walker et al. 2012; Brownlee et al.
10
11 2012) suggest that, at the point of exit from their degree programmes, the preservice
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13 teachers in this study had not yet fully embraced constructivist epistemologies.
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21 With regard to conceptions of teaching, this study found that preservice teachers
22
23 increasingly perceived a tension between befriending pupils and maintaining authority
24
25 as teachers. Their concerns about class management during school placement caused
26
27 them to become less idealistic and more pragmatic in their espoused pedagogical
28
29 aspirations and subsequently incorporated the importance of discipline, self-confidence
30
31 and class management into their personal theories. However, there were also internal
32
33 tensions and contradictions between different competing beliefs held by the participants
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35 in this study. For example, as they embarked on their programme, preservice teachers
36
37 espoused beliefs about the importance of being nurturing in their engagement with
38
39 learners, while, as they approached their transition into the workforce, they were more
40
41 concerned about being authoritative in order to ensure their personal survival in the
42
43 classroom. On the other hand, while their stance towards teaching was less learner-
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45 focussed and more transmission-orientated at the beginning of their programme, they
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47 embraced more child-centred pedagogies at the end (Howard et al. 2000; Johnston et al.
48
49 2001; Schraw and Olafson, 2002; Tsai, 2002; White, 2000). The conceptions of
50
51 teaching of preservice teachers in this study became increasingly identified the need for
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53 reflective practice. However, similar to other studies, preservice teachers demonstrated
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55 little evidence of a critically reflective stance, with most reflections focussing on
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3 concerns which were of a technical or practical nature (Bonfield and Horgan, 2016).
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6 **Conclusion**

7

8
9 Beliefs reveal how preservice teachers view knowledge and learning and also suggest
10 how they may enact their classroom practice (Howard et al. 2000; Johnston et al. 2001;
11 Schraw and Olafson, 2002; Tang et al, 2014; Tsai, 2002; White, 2000; Yadav and
12 Koehler, 2007). Understanding the beliefs of teachers is crucial for us as teacher
13 educators as we strive to develop programmes of optimal and lasting impact. As we
14 begin to understand more fully how the beliefs of teachers are formed, developed,
15 integrated or rejected we will be better able to conceptualise preservice programmes
16 that are conducive to the education of teachers who can respond with fluidity and
17 flexibility to the ever-changing demands of learning and teaching within diverse
18 educational contexts (Valanides and Angeli, 2005).
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32 This study provides powerful insights into the evolving personal theories
33 regarding self, learning and teaching of undergraduate preservice teachers during their
34 participation in a Bachelor of Education programme. Given the limited research base on
35 links between pre-service teachers' personal theories and their teaching and learning
36 strategies (Brownlee, 2003; Walker et al. 2012), this longitudinal qualitative study
37 contributes to the literature by demonstrating significant change and increased
38 sophistication in pre-service teachers' personal theories regarding the teacher's role, the
39 value of reflective practice, the different needs of learners and varying approaches to
40 pedagogy. We concur with Walker et al. (2012) and Tang et. al. (2014) who found that
41 while maturation was a factor in belief change, it was the nature of learning experiences
42 which was most impactful. Challenging, meaningful learning experiences such as the
43 Alternative Education Placements which were located in non-traditional teaching
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3 contexts and often involved working with children with special education needs were
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5 found to expand preservice teachers beliefs and deepen their understanding of learning
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7 and teaching. Preservice teachers in this study reported that their understanding of the
8
9 specific learning needs of pupils was augmented substantially as a result of their
10
11 experiences in non-mainstream settings. This is consistent with recommendations made
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13 in the Report of the International Review Panel (2010) for teacher education in Ireland
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15 with current reconceptualised placements providing students an opportunity to work in
16
17 non-traditional teaching contexts.
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24 Findings point to lacunae in preservice teachers' capacity for critical reflection
25
26 embracing an awareness of equity issues and an understanding that actions and events
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28 can be understood from a range of different perspectives and are influenced by social,
29
30 cultural, historical and political contexts (Bonfield and Horgan, 2016). Findings also
31
32 demonstrate how classroom management concerns often prompt preservice teachers to
33
34 adopt progressively more cautious and traditional pedagogical approaches, despite their
35
36 espoused commitment to constructivism and child-centred education.
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41 The significance of this study is underpinned by the research methodology
42
43 which embraced a qualitative longitudinal analysis, focussing on the contexts and
44
45 conditions that affect change over time (Saldana, 2003). Using 'snapshots in time'
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47 taken over the course of their initial teacher education programme, this research
48
49 presents an iterative analysis of preservice teachers' interrogations and revisions of their
50
51 espoused beliefs about teaching and learning. In this way, it situates participants at the
52
53 nexus point of insight, informed by a retrospective interrogation of prior experience and
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55 memory and guided prospectively by their internal compass of values, hope and
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3 expectation. It conceptualises reflection within a temporal continuum of past, present
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5 and future, addressing concerns about retrospective conceptions of reflective practice
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7 raised by researchers such as Conway (2001) and Urzúa and Vásquez (2008).
8
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11 Analysis within qualitative longitudinal analysis is complex and
12
13 multidimensional and can be approached cross-sectionally, analysing change across
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15 cohorts at different points in time, or longitudinally capturing each individual's
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17 narrative. While individual narrative data were gathered and analysed, it was not
18
19 possible to present a narrative analysis paper due to the volume of the data. The
20
21 predominance of cross-sectional data in our reporting of the study is a limitation of this
22
23 paper. Another limitation of the study is its duration which was confined to the three-
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25 year B.Ed. programme of preservice teachers. We are cognisant that caution should be
26
27 exercised in interpreting the findings as preservice teachers' beliefs on exiting their
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29 programme may not withstand the challenges of socialisation during their induction into
30
31 school (Zeichner and Gore, 1990).
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37 As this study involved preservice teachers who participated in the three-year
38
39 B.Ed programme in Ireland prior to its reconceptualisation to a four-year programme,
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41 this study provides valuable baseline data which can be used comparatively in future
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43 research to assess changes in cognitions of preservice teachers who participate in the re-
44
45 conceptualised B.Ed programme in Ireland. The current research gives testimony to the
46
47 challenges encountered by preservice teachers as they grapple with the often competing
48
49 demands presented within an initial teacher education programme. It draws attention to
50
51 the need to develop preservice teachers' agency and self-knowledge so that they have an
52
53 awareness of their beliefs and theories and are empowered with the disposition of
54
55 "openmindednes" (Dewey, 1933, 30) to question and test these beliefs in the light of
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57 experience and practice. Arising from this study, it is recommended that teacher
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3 education programmes provide structured opportunities for preservice teachers to
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5 interrogate the nature and cohesiveness of their beliefs about learning and teaching and
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7 explore how their beliefs impact their pedagogical approaches. Developmental
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9 preservice portfolios can provide valuable opportunities for preservice teachers to make
10
11 explicit tacit knowledge and assumptions; to document their learning and experiences
12
13 and to approach teaching as a scholarly inquiry. Finally, if, as Fives and Buehl (2010)
14
15 suggest, preservice teachers' unconscious beliefs about teaching and learning determine
16
17 the effectiveness of teacher education courses, then there is an urgent need for more
18
19 research which examines longitudinally the evolving belief systems of preservice
20
21 teachers within concurrent and consecutive programmes of teacher education nationally
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23 and internationally.
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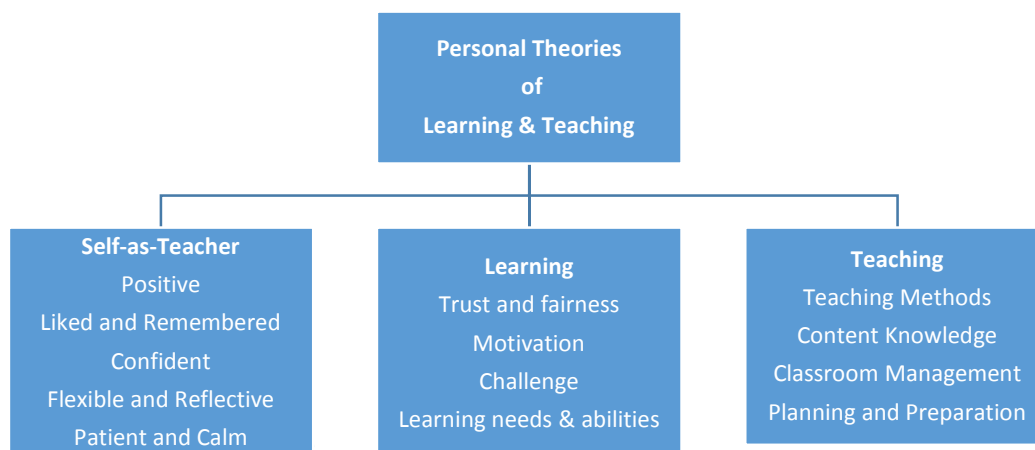


Fig 1: Themes with sub-themes listed in declining order of priority

	Incipient	End of Year 1	End of Year 2	End of Year 3
Personal Theories of Learning	No reference to pupil needs Effective teaching prepares pupils for life.	Acknowledge that pupils' have diverse learning needs Effective teaching promotes learning, develops confidence and prepares pupils for life	Acknowledge that pupils' have diverse learning needs No reference	Strong emphasis on need to cater for pupils learning needs and abilities Effective teaching develops the whole child
	Strong identification with pupils' feelings	Identify less with pupils' feelings Need to discipline, motivate and challenge pupils	Identify less with pupils' feelings Activity and participation enhance pupil enjoyment Need to balance pupil contentment with pupil challenge	Pupil-teacher and pupil-pupil relationships are important Need to balance pupil contentment with challenge
Personal Theories of Teaching	Flexibility is important Effective teaching engages the learners Conduit metaphor of teaching	Planning and preparation and flexibility are important Effective teaching is child-centred and activity based Conduit metaphor of teaching Class management is essential	Planning, preparation, flexibility and reflection are important Effective teaching involves practical, applicable methods Less evidence of conduit metaphor Class management and discipline are essential Less idealistic regarding what is achievable	Strong belief in value of reflection and discovery learning Identifying appropriate methods involves trial and error Less evidence of conduit metaphor Class management and discipline are essential
Conceptions of Self-as-Teacher	Desire to be liked and remembered Believe teaching is easy	Still desire to be liked and remembered, but recognise tensions between role of friend and teacher Self-confidence is augmented through familiarity with essential teaching skills	Still wish to be liked and remembered but survival concerns dominate Self-confidence is associated with ability to control class	Still wish to be liked but need to assert authority Self-confidence is associated with ability to control class

Table 1: Evolving Personal Theories of Learning, Teaching and Self-as-Teacher